

KFOURY
"Electronic Device With Rotatable
Keypad And Display"

Appl. No. 09/941,521
Confirm. No. 7363
Art Unit 2655

CLAIMS

A 1. (Original) A method of orienting a character input area and a display image for an electronic device, comprising:

sensing an orientation of an input area relative to a housing of the electronic device; and

configuring a display image orientation on a display of the electronic device relative to the housing as a function of the orientation of the input area.

2. (Original) The method of claim 1, sensing the orientation of the input area includes at least one of sensing the orientation through input from a GUI interface, through a dome sheet array, a fixed key and a sensor.

3. (Original) The method according to claim 1, sensing an orientation of an input area by determining the orientation of a physically rotatable input area, configuring the display image orientation by electronically rotating the display image orientation.

4. (Original) The method according to claim 1, sensing an orientation of an input area by sensing the orientation of a keypad.

5. (Original) The method according to claim 4, remapping keys based on a look-up table relative to key sensors.

KFOURY
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Art Unit 2655

6. (Original) The method according to claim 1, modifying image forming display drivers in the electronic device in response to sensing the orientation of the input area.

A 7. (Original) A portable electronic device having a housing, comprising:

an input area disposed on the housing;
a display having a display image disposed on the housing;
a sensor for providing a sensor signal representative of an orientation of the input area relative to the housing; and
a display system for changing, in response to the sensor signal, an orientation of the display image on the display relative to the orientation of the input area and as a function of the orientation of the input area.

8. (Original) The device of claim 7, the character input area is rotatable; the display image is electronically rotatable.

9. (Original) The device of claim 7, the character input area includes a touchscreen and wherein keys are visually rotatable.

10. (Original) The device of claim 7, the input area is a keypad.

11. (Original) The device of claim 7, the input area includes a rotatable keypad assembly having a keypad support, a keypad disc and a keypad membrane disposed between the keypad support and the keypad disc.

KFOURY
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Confirm. No. 7363
Art Unit 2655

12. (Original) The device of claim 11, the keypad support includes a plurality of projections, the keypad membrane includes corresponding notches and the keypad disc includes a plurality of tabs corresponding to the notches and plurality of projections.

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13. (Original) The device of claim 12, each of the plurality of tabs includes a slot to receive a keypad support projection, and a seat surface rotatably engageable with a surface of a cover of the device.

14. (Original) The device of claim 7, the input area has at least first, second and possibly third orientations, the second orientation rotationally substantially 90 degrees counterclockwise from the first orientation, and the third orientation rotationally substantially 90 degrees clockwise from the first orientation.

15. (Original) The device of claim 14, the character input area has a fourth orientation rotationally substantially 180 degrees from the first orientation.

16. (Original) The device of claim 7, the electronic device further comprises at least one lookup table for remapping the keys relative to the key sensors.

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Art Unit 2655

A 17. (Original) The device according to claim 8, the electronic device further comprises display drivers for forming the display image on the display, and a processor for receiving the sensor signal and in response thereto modifying the display drivers in the electronic device for forming the display image on the display as a function of the orientation of the character input area.

18. (Original) A portable electronic device, comprising:
a physically rotatable keypad;
a display having a display image;
a sensor for providing a sensor signal representative of an orientation of the keypad relative to the electronic device;
display drivers for forming the display image on the display; and
a processor for receiving the sensor signal and in response thereto modifying the display drivers for forming the display image on the display with an orientation that is a function of the orientation of the keypad.

19. (Original) The device of claim 18, the keypad has a plurality of keys held in a key housing, and a plurality of key sensors that sense activation of the keys, the key sensors located on a sensor housing.

20. (Original) The device of claim 19, the key sensors are one of resistive sensors, capacitive sensors, and bubble switches.

KFOURY
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Appl. No. 09/941,521
Confirm. No. 7363
Art Unit 2655

A 21. (Original) The device of claim 18, the keypad has at least first, second and possibly third orientations, the second orientation rotationally substantially 90 degrees counterclockwise from the first orientation and the third orientation rotationally substantially 90 degrees clockwise from the first orientation.

22. (Original) The device of claim 21, the keypad has a fourth orientation rotationally substantially 180 degrees from the first orientation.

23. (Original) The device of claim 18, wherein the electronic device further comprises at least one lookup table for remapping the keys relative to the key sensors.

24. (Original) A portable electronic device, comprising:
a housing;
a keypad pivotally disposed on the housing, the keypad pivotally positionable between at least first and second positions;
a display disposed on the housing;
the display having a first display configuration when the keypad is in the first position,
the display having a second display configuration when the keypad is in the second position.

KFOURY
"Electronic Device With Rotatable
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Appl. No. 09/941,521
Confirm. No. 7363
Art Unit 2655

25. (Original) The device of Claim 24, the keypad is pivoted a first angle between the first and second positions, the first display configuration pivoted a second angle relative to the second display configuration, the first angle the same as the second angle.

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26. (Currently Presented) A portable electronic device, comprising:

a housing having an upper portion and a lower portion;

a keypad disposed on the housing;

a display disposed on the housing;

the display nearer the lower portion of the housing than the keypad, the keypad nearer the upper portion of the housing than display.

27. (Currently Presented) The portable electronic device of Claim 26,

the keypad is rotatably coupled to a side of the housing, the keypad rotatably positionable in at least two positions separated by an angle of approximately 90 degrees,

the keypad remaining on the same side of the housing when in the at least two positions.

28. (Currently Presented) The portable electronic device of Claim 27,

a keypad position detecting sensor,

information on the display oriented based on keypad position detected by the keypad position detecting sensor.

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Appl. No. 09/941,521
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Art Unit 2655

Respectfully submitted,



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